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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,956	06/09/2004	Bill Yang	13565-US-PA	3955

EXAMINER	
LE, HUYEN D	

ART UNIT	PAPER NUMBER
2615	

NOTIFICATION DATE	DELIVERY MODE
02/01/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

Office Action Summary	Application No. 10/709,956	Applicant(s) YANG, BILL	
	Examiner HUYEN D. LE	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 16-18 and 55-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 16-18 and 55-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/17/08&6/30/07</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: IDS filed 7/28/06&11/17/06&6/20/06&4/14/05.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 64 recites the limitation "sound source entities" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 55-59 and 63-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang (US 2004/0218775).

Regarding claim 1, Huang teaches an earphone structure that comprises a case (30), a main speaker (21) and a plurality of sub-speakers (22, 23, 24), and a cover (10, 40, figures 5, 6). As broadly claimed, Huang shows a composite chamber (the chamber in the body 10), and the sub-speakers (22, 23, 24) that are disposed on the composite chamber (figure 3), such that the sound wave generated by the sub-speakers forms a composite sound field. As shown in figures 3, 5, and 6, the sound wave generated by the sub-speakers (22, 23, 24) as well as the sound wave generated by the main speaker (21) are propagated out of the earphone.

Regarding claims 2-5, Huang shows the sub-speakers (22, 23, 24) as claimed (figures 3, 4).

Regarding claim 6, Huang shows the composite chamber that is a hollow column (figures 5, 6).

Regarding claims 55 and 63, Huang teaches an earphone structure that comprises a composite chamber (the chamber inside the cover portion 30, figures 3, 5, 6) inside a case (30) and a cover (10). The composite chamber receives a plurality of sound source signals or sound source entities and forms a composite room such that a composite sound field is formed by the sound source signals or the sound source entities.

Regarding claims 56-59 and 64-67 (as best understood with regarding 112, 2nd as mentioned above), Huang shows the sound source signals or sound source entities (21, 22, 23, 24) as claimed (figures 3, 5, 6).

4. Claims 55-57 and 60-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura et al. (U.S. patent 3,984,885).

Regarding claims 55-57 and 60-63, Yoshimura teaches an earphone structure that comprises a composite chamber (the chamber inside the casing 6, figure 2) inside a case (6) and a cover (2). The composite chamber receives a plurality of sound source signals or sound source entities and forms a composite room such that a composite sound field is formed by the sound source signals or the sound source entities.

5. Claims 55-57 and 63-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Weffer (U.S. patent 6,263,085).

Regarding claims 55-57 and 63-65, Weffer teaches an earphone structure that comprises a composite chamber (the chamber between the inner face 16 and the faces 21, 22, 23, 24, figures 3, 4) inside a case (15, 16) and a cover (37). As shown in the drawings, the composite chamber receives a plurality of sound source signals or sound source entities and forms a composite room such that a composite sound field is formed by the sound source signals or sound source entities.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16-18, 60-62 and 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 2004/0218775).

Regarding claim 16, Huang does not specifically teach a sound field simulation process as claimed. However, it is well known in the art to provide a sound signal source for the earphone.

Therefore, it would have been obvious to one skilled in the art to provide any sound signal source such as a sound field simulation process for the sub-speakers and the main speaker of the Huang device for providing better sound signal source to the earphone.

Regarding claims 17-18, it is obvious that the sound signal source or the sound field simulation process is designed based on a frequency-divided point of the sub-speakers and a delay process for the subwoofer (22), the center channel speaker (24), and the rear surround speaker (23).

Regarding claims 60 and 68, Huang does not specifically teach a sound field simulation process as claimed. However, Huang does not restrict to any sound source for the device; it therefore would have been obvious to one skilled in the art to provide any sound source signals or sound source entities such as a sound field simulation process for the Huang device for providing better sound source signals to the earphone.

Regarding claims 61-62, 69 and 70, Huang does not specifically teach a frequency-divided point of the sound source signals or sound source entities as claimed. However, it is known in the art to provide to provide a frequency-divided point and delay process for the low and high frequency speakers.

Therefore, it would have been obvious to one skilled in the art to provide the frequency-divided point of the sound source signals or the sound source entities and a delay process for the speakers (21, 22, 23, 24) of Huang for providing better source signals to the earphone.

8. Claims 60-62 and 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weffer (U.S. patent 6,263,085).

Regarding claims 60 and 68, Weffer does not specifically teach a sound field simulation process as claimed. However, Weffer does not restrict to any sound source for the device; it therefore would have been obvious to one skilled in the art to provide any sound source signals

such as a sound field simulation process for the Weffer device for providing better sound source signals to the earphone.

Regarding claims 61-62, 69 and 70, Weffer does not specifically teach a frequency-divided point of the sound source signals as claimed. However, it is known in the art to provide to provide a frequency-divided point and delay process for the woofers and tweeters.

Therefore, it would have been obvious to one skilled in the art to provide the frequency-divided point of the sound source signals and a delay process for the woofers and the tweeters (25, 26) for providing better source signals to the earphone.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HL
January 21, 2008



HUYEN LE
PRIMARY EXAMINER